



**EXAM PAPERS PRACTICE**

# **Psychology**

## **Memory Topic Questions**

1

- (a) Read the item and then answer the questions that follow.

A researcher investigating the multi-store model of memory tested short-term memory by reading out loud sequences of numbers that participants then had to repeat aloud immediately after presentation. The first sequence was made up of three numbers: for example, 8, 5, 2. Each participant was tested several times, and each time the length of the sequence was increased by adding another number.



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Use your knowledge of the multi-store model of memory to explain the purpose of this research and the likely outcome.

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(4)

- (b) After the study was completed, the researcher decided to modify the study by using sequences of letters rather than numbers.

Suggest **one** 4-letter sequence **and one** 5-letter sequence that the researcher could use. In the case of **each** sequence, give a justification for your choice. Use a different justification for each sequence.

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(4)  
(Total 8 marks)

**2**

Complete the missing parts of the table, **A**, **B**, **C** and **D**, in relation to features of the multi-store model of memory.

|                          | <b>Capacity</b> | <b>Duration</b>     | <b>Coding</b>     |
|--------------------------|-----------------|---------------------|-------------------|
| <b>Sensory register</b>  | <b>A</b>        | 250 milliseconds    | Modality specific |
| <b>Short-term memory</b> | 7 +/-2          | <b>B</b>            | <b>C</b>          |
| <b>Long-term memory</b>  | Unlimited       | Potentially forever | <b>D</b>          |

(Total 4 marks)

**3**

According to the multi-store model of memory, there are several ways in which short-term memory and long-term memory differ.

Explain how the findings of **one or more** studies demonstrate that short-term memory and long-term memory are different.

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(Total 4 marks)

4

Research has suggested that the encoding and capacity of short-term memory are different from the encoding and capacity of long-term memory.

Explain what is meant by coding.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Total 2 marks)

5

Outline the difference between the capacity of short-term memory and the capacity of long-term memory.

\_\_\_\_\_  
\_\_\_\_\_

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(Total 2 marks)

6

The multi-store model of memory proposes that there are separate short-term and long-term stores.

Explain **two** differences between short-term memory and long-term memory in this mode

**Difference 1** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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Extra space \_\_\_\_\_  
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Difference 2 \_\_\_\_\_

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Extra space \_\_\_\_\_

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(2)  
(Total 4 Marks)

7

Outline the main features of the multi-store model of memory.

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EXAM PAPERS PRACTICE

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Extra space \_\_\_\_\_

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(Total 6 marks)

**8**

The multi-store model of memory has been criticised in many ways. The following example illustrates a possible criticism.

Some students read through their revision notes lots of times before an examination, but still find it difficult to remember the information. However, the same students can remember the information in a celebrity magazine, even though they read it only once.

Explain why this can be used as a criticism of the multi-store model of memory.

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(Total 4 marks)

**9**

A case study was carried out on Peter whose brain was damaged in a motorcycle accident. Psychologists tested how many numbers he could hold in his short-term memory. They did this by reading him lists of numbers and asking him to recall the numbers immediately in the right order. He could recall a maximum of two items. The psychologists found that his long-term memory was normal.

- (a) How was Peter’s short-term memory after the accident different from most adults’ short-term memory?

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(2)

(b) Does this case study support the multi-store model of memory? Explain your answer.

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(4)

(c) Identify **one** ethical issue associated with this case study of Peter. Suggest how psychologists could deal with this ethical issue.

Ethical issue \_\_\_\_\_

EXAM PAPERS PRACTICE

How psychologists could deal with this ethical issue \_\_\_\_\_

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(4)  
(Total 10 marks)



10

The following are all concepts relating to memory:

- A Duration
- B Capacity
- C Encoding
- D Retrieval.

In the table below, write which **one** of the concepts listed above (**A, B, C** or **D**) matches each definition.

| Definition   | Concept |
|--|---------|
| The length of time the memory store holds information                      |         |
| Transforming incoming information into a form that can be stored in memory |         |

(Total 2 marks)

11

Describe **one** way in which psychologists have investigated the duration of short-term memory. In your answer, you should include details of stimulus materials used, what participants were asked to do and how duration was measured.

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(Total 4 marks)

12

Jamie wanted to contact his doctor. He looked up the number in his telephone directory. Before he dialled the number, he had a short conversation with his friend. Jamie was about to phone his doctor, but he had forgotten the number.

Use your knowledge of the multi-store model to explain why Jamie would not remember the doctor's number.

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Extra space

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(Total 4 marks)

13

**EXAM PAPERS PRACTICE**  
A researcher carried out an experiment to investigate how many numbers could be held in short-term memory. The participants were 15 children and 15 adults. Participants were asked to repeat lists of random numbers, in the correct order, as soon as they were read out by the researcher. For example, when the researcher said, "3, 4, 2, 8" the participant immediately repeated "3, 4, 2, 8". When the researcher then said, "7, 5, 9, 6, 4" the participant immediately repeated "7, 5, 9, 6, 4". One number was added to the list each time until participants were unable to recall the list correctly. Each participant's maximum digit span was recorded.

(a) Write an appropriate non-directional hypothesis for this experiment.

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(2)

(b) Explain why the researcher used an independent groups design for this experiment.

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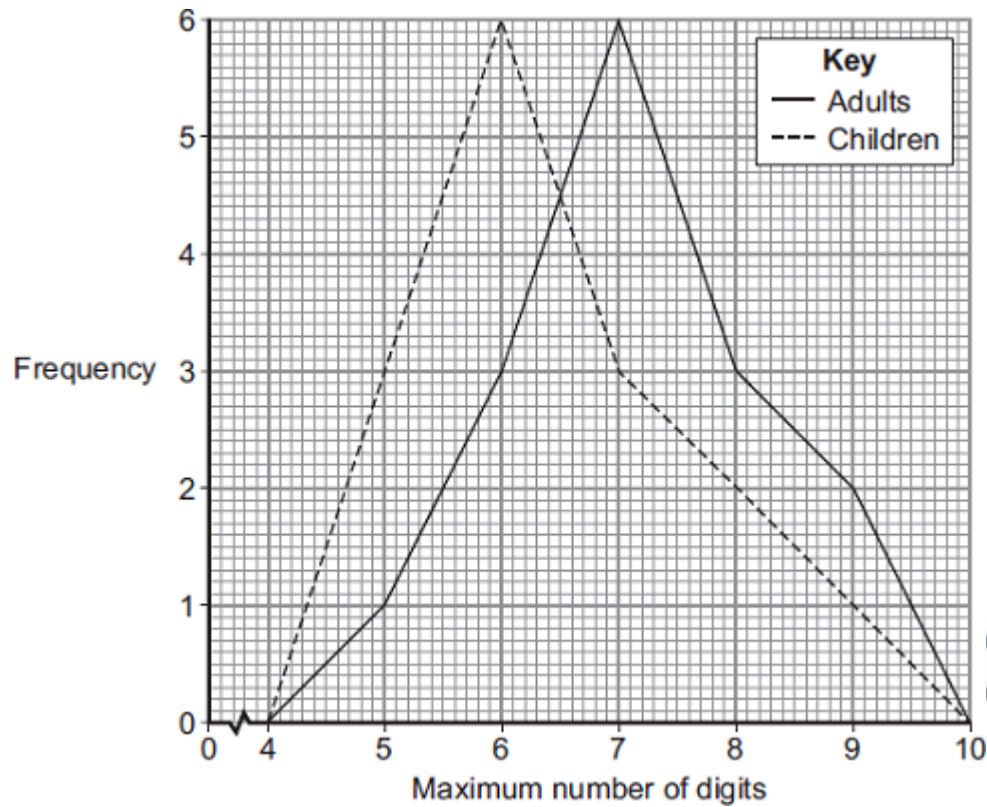
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(2)

(c) **Frequency distribution of the maximum number of digits correctly recalled by children and adults**



Write the mode for each group in the table below.

| Age group | Mode |
|-----------|------|
| Children  |      |
| Adults    |      |

(2)

(d) What does the frequency distribution show about the results?

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(3)

(e) Do the results of this experiment support the findings of other research into the capacity of short-term memory? Explain your answer.

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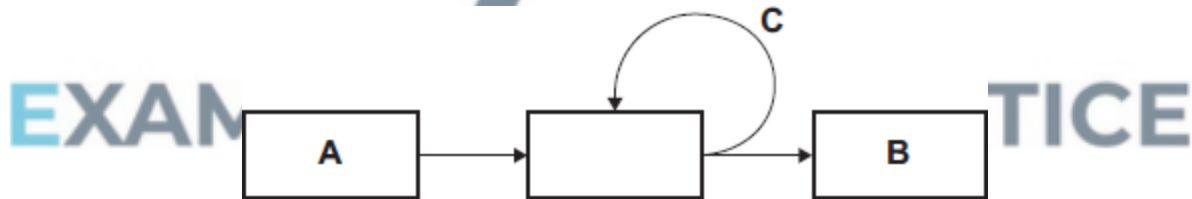
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(2)

(Total 11 marks)

14

This is a diagram of Atkinson and Shiffrin's multi-store model of memory.



From the following list, select the appropriate labels for **A**, **B** and **C**. Write **A**, **B** or **C** in the **three** correct boxes.

Secondary memory

Long-term memory

Recognition

Rehearsal loop

Central executive

Sensory memory

Short-term memory

(Total 3 marks)

15

Describe **and** evaluate the multi-store model of memory.

(Total 12 marks)

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16

A, B and C relate to memory. Write the appropriate letter in the box below. The first one has been done for you.

A  $7 \pm 2$

B Up to 30 seconds without rehearsal  
Write letter **B** in the appropriate box below.

C Mainly acoustic  
Write letter **C** in the appropriate box below.

|          | Short-term memory | Long-term memory |
|----------|-------------------|------------------|
| Encoding |                   |                  |
| Capacity | A                 |                  |
| Duration |                   |                  |

(Total 2 marks)

17

Describe and evaluate the multi-store model of memory. Refer to evidence in your answer.

(Total 16 marks)

18

Describe **and** evaluate the multi-store model of memory.

(Total 16 marks)

19

Complete the following statement about long-term memory. Shade **one** box only.

Information not available for conscious inspection refers to:

A Episodic memory

B Procedural memory

C Semantic memory

(Total 1 mark)

20

Complete the following statement about long-term memory. Shade **one** box only.

Information stored with reference to time and place refers to:

- A Episodic memory
- B Procedural memory
- C Semantic memory

(Total 1 mark)

21

Give **one** example of a semantic memory and **one** example of an episodic memory. Briefly explain **one** difference between these types of long-term memory.

(Total 3 marks)

22

Distinguish between *procedural* memory and *semantic* memory.

(Total 3 marks)

23

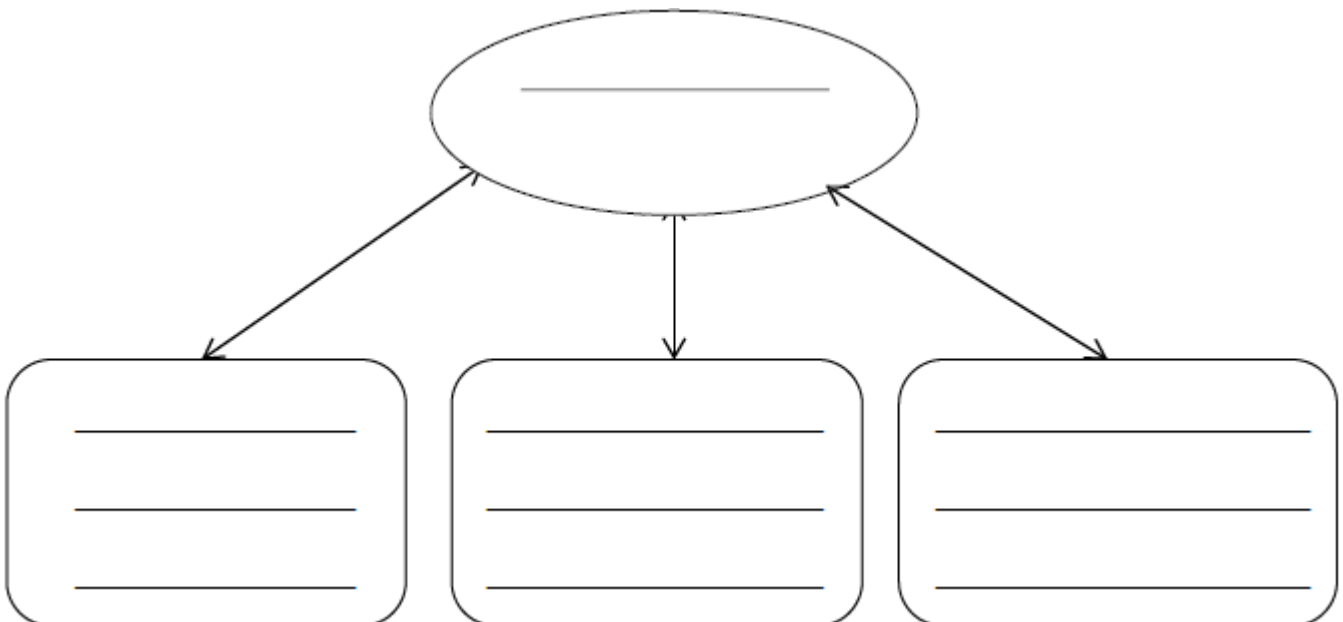
Psychologists have identified differences between episodic memory, procedural memory and semantic memory.

Define **two** of these types of memory. Briefly explain **one** difference between the two types of memory that you have defined.

(Total 3 marks)

24

Below is a diagram of the working memory model. Write the name of **each** of the **four** components of working memory in the space provided.



(Total 4 marks)

25

Describe **and** evaluate the working memory model of memory.

(Total 16 marks)

26

Three components of the working memory model are the central executive, the phonological loop and the visuo-spatial sketchpad.

Briefly outline **each** of these components.

**Central executive** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Phonological loop** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Visuo-spatial sketchpad** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**EXAM PAPERS PRACTICE** (Total 6 marks)

27

Tick **two** of the boxes below to indicate which of the following are features of the working memory model.

- A Serial position curve
- B Incidental learning store
- C Central executive
- D Phonological loop

(Total 2 marks)



28

Explain **one** strength **and one** weakness of the working memory model.

**Strength** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Weakness** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Total 4 marks)

29

Read the item and then answer the questions that follow.

An experiment was carried out to test the effects of learning similar and dissimilar information on participants' ability to remember.

In **Stage 1** of the experiment, 10 participants in **Group A**, the 'similar' condition, were given a list of 20 place names in the UK. They were given two minutes to learn the list. 10 different participants in **Group B**, the 'dissimilar' condition, were given the same list of 20 place names in the UK. They were also given two minutes to learn the list.

In **Stage 2** of the experiment, participants in **Group A** were given a different list of 20 more place names in the UK, and were given a further two minutes to learn it. Participants in **Group B** were given a list of 20 boys' names, and were given a further two minutes to learn it.

In **Stage 3** of the experiment, all participants were given five minutes to recall as many of the 20 place names in the UK, from the list in **Stage 1**, as they could. The raw data from the two groups is below.

Number of place names recalled from the list in Stage 1

| Group A | Group B |
|---------|---------|
| 5       | 11      |
| 6       | 10      |
| 4       | 11      |
| 7       | 13      |
| 8       | 12      |
| 4       | 14      |
| 5       | 15      |
| 4       | 11      |
| 6       | 14      |
| 7       | 14      |

- (a) What is the most appropriate measure of central tendency for calculating the average of the scores, from the table, in each of the **two** groups? Justify your answer.

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EXAM PAPERS PRACTICE

(2)

- (b) Calculate the measure of central tendency you have identified in your answer to **part (a)** for **Group A** and **Group B**. Show your calculations for each group.

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(4)

- (c) In **Stage 3** of the experiment, several participants in **Group A**, the 'similar' condition, recalled words from the **Stage 2** list rather than the **Stage 1** list.

Use your knowledge of forgetting to explain why this may have occurred.

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(2)

EXAM PAPERS PRACTICE

(Total 8 marks)

30

Read the item and then answer the question that follows.

Martin is studying for his modern language exams. He revises French followed by Spanish on the same night and then gets confused between the two: for example, he remembers the French word for 'chair' instead of the Spanish word for 'chair'. Sometimes, his mum helps to test Martin's vocabulary. When he is unable to remember a word, his mum tells him the first letter, then he can often recall it correctly.

Discuss **two** explanations for forgetting. Refer to Martin's experiences in your answer.

(Total 12 marks)

31

A brain scan shows that one area of the brain is more active when a person is doing a verbal task. However, when this person is doing a visual task, a different area of the brain is more active.

- (a) Explain how this could relate to the working memory model. Refer to different parts of the working memory model in your answer.

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**Extra space** \_\_\_\_\_

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(4)

- (b) Give an example of an appropriate verbal task and an appropriate visual task which could be used during the brain scan.

**Verbal task** \_\_\_\_\_

**EXAM PAPERS PRACTICE**

**Visual task** \_\_\_\_\_

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(2)  
(Total 6 marks)

32

- Explain **one** limitation of the working memory model.

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(Total 2 marks)

**33** Outline and evaluate the working memory model.

(Total 16 marks)

**34** Outline the working memory model.

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Extra space



(Total 4 marks)

**35** Explain **one** strength of the working memory model.



(Total 3 marks)

**36** Claire can search through family photos on her laptop and listen to music at the same time. However, she finds it difficult to read her e-mails when talking to a friend on the phone.

Use your knowledge of the working memory model to explain why Claire is able to perform the first two tasks at the same time, but finds it difficult to perform the second two tasks at the same time.

(Total 4 marks)

**37** Choose **one** study of the working memory model. Briefly outline what the participants were asked to do in this study.

(Total 2 marks)

**38** Outline **two** features of the working memory model.

(Total 2 marks)

39

Outline the main features of the working memory model.

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Extra space

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(Total 4 marks)

40

Outline **one** strength and **one** limitation of the working memory model.

Strength

EXAM PAPERS PRACTICE

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Extra space

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(2)

**Limitation** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Extra space** \_\_\_\_\_  
\_\_\_\_\_

**(2)**  
**(Total 4 marks)**

**41**

Bryan has been driving for five years. Whilst driving, Bryan can hold conversations or listen to music with little difficulty.

Bob has had four driving lessons. Driving requires so much of Bob's concentration that, during lessons, he often misses what his driving instructor is telling him.

With reference to features of the working memory model, explain the different experiences of Bryan and Bob.

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\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_

**EXAM PAPERS PRACTICE**

**(Total 4 marks)**

42

An experiment was carried out to investigate the working memory model.

One group of participants was asked to carry out two visual tasks at the same time. A different group of participants was asked to carry out a visual task and a verbal task at the same time.

The results showed that the participants who carried out two visual tasks at the same time performed less well on the tasks than participants who carried out a visual task and a verbal task at the same time.

Use your knowledge of the working memory model to explain this finding.

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(Total 3 marks)

43

A researcher studied the effect of context on memory. He used an independent groups design. He tested participants in one of two conditions.

In **Condition 1**, a group of 20 schoolchildren learned a list of 40 words in a classroom. This group then recalled the words in the same classroom.

In **Condition 2**, a different group of 20 schoolchildren learned the same list of 40 words in a classroom. This group then recalled the words in the school hall.

The researcher recorded the results and compared the mean number of words recalled in each condition.

- (a) Identify the independent variable in this study. (1)
- (b) Use your knowledge of retrieval failure to explain the likely outcome of this study. (3)
- (c) In this study, participants were randomly allocated to one of the two conditions. Explain how this might have been carried out. (2)
- (d) In this study, the researcher used an independent groups design. The researcher decided to repeat the study with different participants and to use a matched pairs design.

Explain how these participants could be matched and then allocated to the conditions.

(2)

(Total 8 marks)



44

Identify **and** outline **two** techniques that may be used in a cognitive interview.

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(Total 4 marks)

45

(a) In the context of explanations of forgetting, what is meant by *interference*?

(2)

(b) Choose **one** study in which the effects of interference were investigated. Briefly outline what the participants had to do in the study.

(2)

(c) Briefly discuss **one** limitation of interference as an explanation of forgetting.

(3)

(Total 7 marks)

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46

Outline how a cognitive interview can be used to improve the accuracy of eyewitness testimony (EWT).

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Extra space



(Total 4 marks)

47

A woman is being questioned by a police officer about a heated argument she witnessed on an evening out with friends. The argument took place in a bar and ended with a violent assault. A knife was discovered later by police in the car park of the bar.

‘Did you see the knife the attacker was holding?’, asked the police officer.

‘I’m not sure there was a knife – yes, there probably was,’ replied the woman. ‘I was so scared at the time that it’s hard to remember, and my friends and I have talked about what happened so many times since that I’m almost not sure what I did see.’

Discuss research into **two or more** factors that affect the reliability of eyewitness testimony. Refer to the information above in your answer.

(Total 16 marks)

48

A psychologist carried out a field experiment to investigate the accuracy of eyewitness testimony. The participants were pupils and parents attending a school concert. Just before the concert began, two professional actors had an argument on the stage. During the argument, one actor pushed the other actor. Both actors then left the stage. Some of the audience were approached as they left the concert and were asked to take part in an experiment. Those who agreed were taken to a quiet room and were asked some questions about the argument. For some participants, the questions included, "Did you see the man in glasses push the other man?" In fact, neither man was wearing glasses.

The participants were then asked to describe the argument in their own words.

(a) What is a field experiment?

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(2)

(b) Other than ethical issues, outline **one** weakness of using a field experiment in this investigation.

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**EXAM PAPERS PRACTICE**

(2)

(c) Suggest why the psychologist included the question about the man in glasses.

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(2)

(Total 6 marks)

49

Outline and evaluate research into the effects of anxiety on the accuracy of eyewitness testimony.

(Total 12 marks)

50

Cognitive interviews have been developed to improve witness recall. Identify and explain **two** techniques used in the cognitive interview.

Technique 1 \_\_\_\_\_

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Technique 2 \_\_\_\_\_

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(Total 6 marks)

51

Explain why it might be better to carry out research into eyewitness testimony in the real world, rather than in a laboratory.

**EXAM PAPERS PRACTICE**

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(Total 3 marks)

52

Jenny was standing at a bus stop talking on her mobile phone. The weather was wet and cold. Two men in the bus queue started arguing. One of the men was stabbed and badly injured. Later that day the police questioned Jenny, using a cognitive interview. They asked her to report everything she could remember about the incident even if it seemed unimportant.

Apart from 'report everything', explain how the police could use a cognitive interview to investigate what Jenny could remember.

In your answer you must refer to details from the passage above.

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Extra space



EXAM PAPERS PRACTICE

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(Total 4 marks)

53

An American space shuttle exploded soon after it was launched. All of the astronauts on board were killed. Crowds of people were watching, including friends and relatives of the astronauts. Six months after the explosion, a student decided to investigate the accuracy of some of the eyewitnesses' memory of this event.

- (a) Outline how the student could have used a cognitive interview to investigate this event. Include **at least one** example of what the participants would be asked to do.

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Extra space

EXAM PAPERS PRACTICE

(4)

(b) Explain how anxiety might have affected eyewitness testimony of this event. Refer to psychological research in your answer.

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EXAM PAPERS PRACTICE

(6)  
(Total 10 marks)

54

Outline **one** study that has investigated the effect of anxiety on eyewitness testimony.

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(Total 4 marks)

55

A researcher carried out an experiment to investigate misleading information. Participants were shown a photograph in which a man and a woman were talking. The photograph was then taken away and the participants were asked questions about it. Participants were randomly allocated to condition one or condition two.

Participants in condition one were asked:

**Question A** "How old was the youth in the photograph?"

Participants in condition two were asked:

**Question B** "How old was the man in the photograph?"

(a) Why is **Question A** an example of misleading information?

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(2)



- (b) Name an appropriate experimental design which could be used in this experiment.  
Explain why a repeated measures design would be unsuitable to use in this experiment.

**Experimental design** \_\_\_\_\_

\_\_\_\_\_

**Explanation** \_\_\_\_\_

\_\_\_\_\_

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**Extra space** \_\_\_\_\_

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(4)

- (c) Explain why it would be appropriate to use a pilot study as part of this experiment.

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**EXAM PAPERS PRACTICE**

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**Extra space** \_\_\_\_\_

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(4)

- (d) In this experiment, participants were asked to look at a photograph rather than watch a live conversation. Explain **one** strength and **one** limitation of carrying out the experiment in this way.

**Strength** \_\_\_\_\_

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**Extra space** \_\_\_\_\_

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**Limitation** \_\_\_\_\_

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**Extra space** \_\_\_\_\_

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(4)



(e) Describe **at least one** other research study into misleading information. In your answer you should include details of what participants were asked to do and what results were found.

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Extra space



EXAM PAPERS PRACTICE

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(6)  
(Total 20 marks)

56

Some psychologists argue that there is always more information about an event in a person's memory than can be recalled at any one time. This means that eye-witness recall can be improved by using certain techniques and methods.

Describe and evaluate **at least one** way of improving eye-witness recall. Refer to evidence in your answer.

(Total 12 marks)

57

Some psychologists argue that there is always more information about an event in a person's memory than can be recalled at any one time. This means that eye-witness recall can be improved by using certain techniques and methods.

Describe and evaluate **at least one** way of improving eye-witness recall. Refer to evidence in your answer.

(Total 16 marks)

58

Outline **and** evaluate research into the effects of leading questions on the accuracy of eyewitness testimony.

(Total 8 marks)

59

Outline **and** evaluate research into the effects of misleading information on eyewitness testimony.

(Total 8 marks)

60

(a) One technique used in cognitive interviews is 'report everything'. When using this technique, the police officer in this investigation read the following instructions to the participants:

"Please tell me everything you can remember about what you saw in the film. Do not leave anything out, even the small details you think may be unimportant."

Identify **one other** technique which could have been used by the police officer in this cognitive interview. Write down the instructions that he could have read out to the participants.

Technique \_\_\_\_\_

Instructions to participants \_\_\_\_\_

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(3)

- (b) The psychologist also recorded the number of correct items recalled and the number of incorrect items recalled in each type of interview. The following results were obtained:

|  | <b>Cognitive Interview</b> | <b>Standard Interview</b> |
|--|----------------------------|---------------------------|
| <b>Mean number of correct items recalled</b>   | 45                         | 32                        |
| <b>Mean number of incorrect items recalled</b> | 8                          | 8                         |

From these results, what might the psychologist conclude about the effectiveness of cognitive interviews?

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(2)  
(Total 5 marks)

